

REMARKS

Assignee thanks the Examiner for withdrawing the Office Action mailed January 27, 2003 as a result of the interview with the undersigned on June 9, 2003. The undersigned believes that the Examiner's Interview Summary accurately states the substance of the interview. Accordingly, and in view of the Summary's statement that "no response is needed from the Applicant," assignee is not providing any separate statement of the substance of the interview. Timely correction is requested if such a separate statement is in fact required.

Assignee also notes with appreciation the continued indication that claims 26-29 are allowable.

CLAIMS 1, 5-6, 11, 14-15, 20, 25

Claims 1, 5, and 25 stand rejected under 35 U.S.C. § 102 as anticipated by U.S. Patent 4,602,191 to Davila. These claims call for a regular two-dimensional array of pixel display elements and, among other things, a graphics controller that is physically fastened to the array (claim 1) or mounted on a substrate with the array (claims 5, 25).

Regarding claim 1, the rejection cites Davila as disclosing a "graphics controller (44, figure 5) having an inherent physical coupled [coupling, *sic*] to . . . the array" in Davila's FIG. 5. In the supplemental amendment filed November 8, 2002, assignee amended claim 1 to clarify that the claimed graphics controller is physically fastened, rather than merely coupled, to the array. Davila does not teach or suggest any such physical fastening.

The rejection of claim 5 asserts that a "common substrate is mounted (see printed circuit board 28)." However, the rejection fails to note any teaching or suggestion in Davila that an array of pixel display elements and graphics controller (as well as a power source and fastener) are mounted to a common substrate.¹

The rejection of claim 25 fails to point out any teaching or suggestion in Davila of that claim's "substrate . . . having mounted thereon: (i) a regular two-dimensional array

¹ Claim 5 uses the word "common" in the sense that the substrate is used by multiple elements "in common," not that the substrate is "commonly known," *i.e.*, widely known.

of pixel elements . . . [and] (ii) a graphics controller electrically connected to the array." There is no such teaching or suggestion; Davila's control circuit is not "mounted on" any substrate.

Given Davila's lack of any teaching or suggestion of the subject matter of claims 1, 5, and 25, those claims are allowable. Indeed, Davila notes that the control circuit of FIG. 5 "may be portably carried in a pocket of the garment," C2/L38, which actually teaches away from the programmable lights on the jacket being physically fastened to, or mounted on a substrate with, the control circuit. Tec Air, Inc. v. Denso Mfg. Mich. Inc., 52 USPQ2d 1294, 1298 (Fed. Cir. 1999) ("A reference may be said to teach away when a person of ordinary skill, upon reading the reference, . . . would be led in a direction divergent from the path that was taken by the applicant").

Accordingly, assignee solicits allowance of claim 1 along with its dependent claims 11, 14-15, and 20, allowance of claim 5 along with its dependent claim 6, and allowance of claim 25.

CLAIMS 16-19

Claims 16 and 19 also stand rejected under 35 U.S.C. § 102 as anticipated by Davila. In addition to the limitations of claim 1 (from which they depend) discussed above, these claims call for a programming connector physically coupled (claim 16) or coupleable (claim 19) to the array.

Regarding claim 16, the rejection cites Davila as disclosing a "programming connector physically coupled to the array (see program 46 and power total [sic] circuits, see column 2, lines 48-55)." The rejection of claim 19 mentions nothing about a programming connector at all.

Davila does not teach or suggest any programming connector physically coupled to an array. The "program 46" cited in the rejection is simply a program "which may be stored in a read-only memory (ROM), a tape medium, a random access memory (RAM) inputted by a keyboard, or any other storage medium," C2/L48-51. Davila's statement at C2/L53-55, "[p]ower to all circuits and to the light emitting diode display 48 is

provided by power supply 50" provides no disclosure about any type of connector, much less the programming connector claimed.

Accordingly, the rejections of claims 16 and 19 are without proper basis and must be withdrawn, even without regard to that fact that those claims depend from allowable claim 1. Dependent claims 17-18 depend from claim 16 and are allowable for that reason and on their own merits, *e.g.*, as discussed below regarding claim 18.

CLAIMS 30, 34-51

Claims 30 and 49 also stand rejected under 35 U.S.C. § 102 as anticipated by Davila. These claims call for a regular two-dimensional array of pixel display elements, a graphics controller, and a case. The graphics controller is supported by a case with the array (claim 30) or integrally housed inside the case with a power source (claim 49).

The rejection cites Davila, "program 46 and power total [*sic*] circuits," C2/L48-55, as disclosing a power source integrally housed with the graphics controller in a case. Clearly, however, Davila does not teach or suggest any case that houses a graphics controller and an array of pixel display elements, as recited in claim 30, or a graphics controller and a power source, as recited in claim 49. Indeed, there is no way that the control circuit could be "portably carried in a pocket of the garment," as Davila suggests at C2/L38, in those claimed configurations.

In addition, claim 30 further calls for "a fastener physically coupled to the top of the case," which the rejection has not discussed at all. Such a fastener is not part of, and is indeed unsuitable for, Davila's jacket with programmable lights.

Accordingly, claims 30 and 49, and dependent claims 34-48, 50-51 of claim 30, are allowable.

CLAIMS 7-9, 10, 13, 18, 37, 40

Claims 7-9, 10, 13, 18, 37, and 40 also stand rejected under 35 U.S.C. § 102 as anticipated by Davila. Claim 7 (from which claims 8-9 depend) calls for a two-position fastener. Claims 10, 13, 37, and 40 call for "exactly two buttons" that are "electrically coupled to the graphics controller." Claim 18 calls for a "lack [of] any user-manipulated buttons or switches," excepting removal and replacement of the power source.

Nowhere does the rejection point out where Davila teaches or suggests the particular limitations of these claims. To anticipate any of them, Davila would have to contain "each and every element" of one of the claims, variously including a fastener having two positions (open and closed) and exactly two buttons. Lewmar Marine, Inc. v. Barient, Inc., 3 USPQ2d 1766, 1767 (Fed. Cir. 1987). Davila does not contain that required disclosure, and claims 7-9, 10, 13, 18, 37, and 40 are allowable along with dependent claims 41-43.

CLAIM 21

Claim 21 also stands rejected under 35 U.S.C. § 102 as anticipated by Davila. As discussed in assignee's October 3 Response, claim 21 calls for a "lack [of] any resistor components" in connecting circuitry that conventionally requires such components. The rejection's only reference to resistor components is:

Davila also discloses that illuminated wearable comprising graphics controller and couplings that conduct current between the power source and any resistor components (see figure 5).

Assignee is unsure of the intended meaning of that statement, but it clearly does not point out the claimed lack of resistor components. Although the cited figure 5 of Davila does not show any resistor components, that block diagram is of a type that conventionally omits illustration of such low-level devices. What the reference would need to teach or suggest to anticipate claim 21, which it does not, is the omission of a component that is conventionally required.

Accordingly, claim 21 is allowable.

CLAIMS 22, 24

Claims 22, 24 remain under a 35 U.S.C. § 102 rejection that deems them anticipated by US Patent 6,201,525 to Janney *et al.* As discussed in the Response to Office Action filed October 3, 2002, claim 22 includes various limitations in "means plus function" format, including a "means for displaying a message."

The rejection continues to assert that Janney discloses a "means for displaying a message." To sustain the rejection on the grounds that Janney anticipates claim 22,

however, the Examiner must show that Janney discloses (among other things) the structure, material, or acts described in assignee's specification, or any equivalents, corresponding to such means. 35 U.S.C. § 112(6).

All of the embodiments described in assignee's specification employ as their "display means" two-dimensional arrays of pixel display elements, dimensioned with unconventionally narrow widths to maximize readability versus cost. Neither Janney nor Davila teach or suggest any such display means, and the rejections of claim 22 and claim 24 (which depends from claim 22) cannot stand.

CLAIMS 2-4, 23, 31-33

Claims 2-4, 23, 31-33 stand rejected under 35 U.S.C. § 103 as obvious over Davila in view of Janney and in view of U.S. Patent 6,028,597 to Ryan, Jr. *et al.* These claims are allowable for the same reasons discussed in applicant's October 3, 2002 Response. There, applicant argued against rejections of these claims, rejections that differed in that the primary reference was Guritz instead of Davila. Like Guritz, however, Davila fails to teach or suggest the limitation of claims 2-4, 23, 31-33, either separately or in the cited combination.

As discussed in applicant's October 3, 2002 Response, these claims recite, with varying degrees of specificity, particularly advantageous widths of a two-dimensional array of pixel display elements:

... width in pixels that is between one and five times the character pitch of a character set displayed [claims 2, 31]

... width in pixels that is between one and two times the character pitch of characters displayed [claim 23]

... width in pixels that is between 1.1 and 2 times the character pitch of a character set displayed [claims 3, 32]

... width in pixels that is approximately 1.5 times the character pitch of a character set displayed [claims 4, 33]

The new rejection acknowledges that Davila also does not disclose the claimed widths, and again it does not cite Janney or Ryan, Jr. *et al.* as having any such disclosure. However, the new rejection relies the same flawed reasoning of the old, asserting that

modifying Davila's system for its arrays to have a width as claimed would have been obvious because "such a modification would have involved a mere change in the range of the system."

Again, the narrow display widths called for by claims 2-4, 23, and 31-33 are not just "mere changes" from what is disclosed in Guritz, Davila, or any other cited reference. The claimed display widths are significantly narrower than those of conventional alphanumeric displays. As demonstrated in assignee's specification, P12/L26 – P14/L15, the important metric of display readability versus cost is actually greater at the narrow widths claimed than it is with wider displays. In fact, optimum readability versus cost occurs when the display's width in pixels is only about 1.5 times the character pitch (see FIG. 12, P14/L3).

Assignee respectfully urges the Examiner to give proper consideration to that surprising and unexpected result, which evidences the non-obviousness of the claimed dimensions. In re Soni, 34 USPQ2d 1684 (Fed. Cir. 1995) (stating principle, "that which would have been surprising to a person of ordinary skill in a particular art would not have been obvious").

Another problem with the new rejection, as with the old, is its failure to identify any suggestion in the references of record for the modification it considers obvious. Indeed, none of the cited references even recognize display width as a variable that can be modified to maximize readability vs cost. See MPEP 2144.05 II(B) ("a particular parameter must first be recognized as a result-effective variable, *i.e.*, a variable which achieves a recognized result").

Further, Guritz and Davila do not provide any suggestion or motivation to dimension their "plurality of incandescent lamps" (Guritz) or "programmable lights" (Davila) to a claimed width that is defined in pixels.

Claims 2-4, 23, and 31-33 are thus clearly allowable, even without regard to their dependence on claims that, as discussed above, are themselves allowable.

CONCLUSION

Applicant respectfully requests allowance of all pending claims. Please feel free to telephone the undersigned if it would in any way advance prosecution of this application.

Respectfully submitted,
RAPID PROTOTYPES, INC.
by its representative



Dated: July 7, 2004

Edwin A. Suominen
Reg. No. 43,174

LOUIS J. HOFFMAN, P.C.
14614 North Kierland Boulevard
Suite 300
Scottsdale, AZ 85254
(480) 948-3295